

WHAT IS CLAIMED IS:

1. An apparatus for detecting flaws in a wafer comprising:
 - a detection platform holding a wafer thereon for detecting;
 - a cross-bar ultrasonic detection device positioned above said detection platform for emitting and receiving an ultrasonic wave reflected by the wafer; and
 - a microprocessor for processing said reflected ultrasonic and transmitting to a monitor; whereby detecting flaws in said wafer.
- 10 2. An apparatus for detecting flaws in a wafer according to claim 1, wherein said detection platform is a robot arm for holding and drawing said wafer.
3. An apparatus for detecting flaws in a wafer according to claim 1, wherein said detection platform is a chamber-module detection platform having a pad for carrying said wafer, and a table for carrying said pad.
- 15 4. An apparatus for detecting wafer flaw according to claim 3, wherein said pad is formed with a pair of guiding tracks for guiding said ultrasonic detection device.
5. An apparatus for detecting flaws in a wafer according to claim 1, 20 wherein said ultrasonic detection device has a transducer positioned above said detection platform, and a pair of supporting portion connected with two ends of the transducer, said transducer having an emitting portion and a receiving portion mounted therein.

6. An apparatus for detecting flaws in a wafer according to claim 5 further comprising a sensor mounted in the transducer or the supporting portions for sensing an incoming and outgoing of said wafer and transmitting a beginning or an end message to said microprocessor.

5 7. An apparatus for detecting flaws in a wafer according to claim 1, wherein frequencies of said ultrasonic wave emitted by said ultrasonic detection device are between one hundred million and five thousands million hertz.

8. An apparatus for detecting flaws in a wafer according to claim 1,
10 wherein a width of said ultrasonic detection device is wider than or equal to a radius of said wafer.

9. A method for detecting flaws in a wafer comprising the steps of:
providing a detection apparatus which comprises a detection platform for holding a wafer thereon, a cross-bar ultrasonic detection
15 device positioned above said detection platform, and a microprocessor;
emitting an ultrasonic wave toward a surface of said wafer and receiving a reflected wave from a bottom or a flaw in said wafer;
transmitting said reflected ultrasonic wave to said microprocessor and processing said reflected ultrasonic wave;

20 determining if said wafer has any flaw for marking the flawed wafer via said microprocessor; and

providing a sensor for inspecting if said wafer is transferred to an end thereof for controlling a detecting sequence.

10. A method for detecting flaws in a wafer according to claim 9
further comprising the step of beeping when detecting said wafer has
flaw.

11. A method for detecting flaws in a wafer according to claim 9
5 wherein said cross-bar ultrasonic detection device is positioned above
said wafer.

12. A method for detecting flaws in a wafer according to claim 9
wherein said ultrasonic detection device has an emitting portion and a
receiving portion mounted therein.

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